

BELOV, I.V.

Reports and elections in local organizations of societies. NTO 2  
no.12:33-36 D '60. (MIRA 14:3)

1. Zamestitel' predsedatelya Vsesoyuznogo soveta nauchno-tekhnicheskikh obshchestv.  
(Technical societies)

Name: BELOV, I. V.

Dissertation: Investigation of the movement and combustion of gases in  
the melting range of the standard gases of open-hearth  
furnaces

Degree: Cand Tech Sci

*Depended at  
Publication*

~~Affiliation~~: Min Higher Education USSR, Ural Polytechnic Inst imeni  
S. M. Kirov

~~Defense~~ Date, Place: 1956, Sverdlovsk

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*Belov, I.V.*

137-1958-1-151

Translation from: Referativnyy zhurnal Metallurgiya 1958. Nr 1, p 23 (USSR)

AUTHORS: Belov, I. V., Malysheva, A. I.

TITLE: A Method for and the Results of the Use of an Air Flow to Simulate the Aerodynamics of the Smelting Space of an Open-hearth Furnace (Metod i rezul'taty vozdušnogo modelirovaniya aerodinamiki plavil'nogo prostranstva martenovskoy pechi)

PERIODICAL: Vses. nauch.-issled. inst. metallurg. teplotekhn. Byul. nauchno-tekhnich. inform., 1957, Nr 2, pp 47-63

ABSTRACT: A mathematical method of elaborating experimental data which permits the use of a vector hodograph to represent the distribution of air in the smelting space of an open-hearth furnace relative to the center of the gas stream is examined. Results of the application of this method to the analysis of data obtained by the use of air-flow simulation in a 1:7 scale model of a standard 185-ton open-hearth furnace are adduced. The air flow used to represent the flow of gases was heated to 60-80°. The concentrations of gas and air were calculated on the basis of the fields of excess temperature measured by a copper-constantan string thermocouple. The gas flow is symmetrical relative to the axis of the furnace.

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137-1958-1-151

## A Method for and the Results of the Use of an Air-flow (cont.)

when the volumetric air-to-gas ratio,  $v_a/v_g$ , varies in the interval from 1.6 to 3.0. An increase in  $v_a/v_g$  raised the degree of deformation and the angle of flare of the flow of gas over the surface of the bath. The mean excess-air coefficient in the flame displays the existence of a minimum along the length of the furnace, which was obtained by investigations both on the model and with a 370-ton gas-fired furnace. The difference in the position of the minimum is explained by the difference in the height of the hearth blocks of the gas vaults from the surface of the bath. As air in large quantities enters through one of the vertical ducts, the air flow is displaced toward that portion of the furnace to which least air is delivered. For  $v_a/v_g$  and  $v_{a\text{ front}}/v_{a\text{ rear}}$  ratios not in excess of 2, the symmetry of the gas flow is not disturbed

G G.

1. Open hearth furnaces--Operation 2. Open hearth furnaces--Air distribution--Analysis 3. Open hearth furnaces--Model test results

Card 2/2

BELOV, I. V.

SOV/137-58-8-16499

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 38 (USSR)

AUTHORS: Belov, I.V., Telesov, S.A.

TITLE: Operation of Open-hearth Furnaces in Conjunction With Cold Air Being Blown Into the Gas Uptake (Rabota martenovskikh pechey pri vduvani kholodnogo vozdukha v gazovyy kesson)

PERIODICAL: Tr. Nauchno-tekhn. o-va chernoy metallurgii, 1957, Vol 18, pp 269-276

ABSTRACT: A presentation of operational performance indices and data of a thermal investigation performed on furnaces of the KMK, ChMZ, MMK, and of the im. Voroshilov plant. It is noted that introduction of cold air into the gas uptakes resulted in a 3 to 6% reduction in smelting time and a more stable operation of the furnaces throughout an entire campaign. The specific fuel consumption remained unchanged in most furnaces and even diminished occasionally. The KMK and the MMK reported improvements in the service life of refractories. Investigations which dealt with processes of combustion and heat exchange in the hearth are described. An increase in CO<sub>2</sub> content, noted in gases of the hearth, resulted in more intense

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SOV/137-58-8-16499

Operation of Open-hearth Furnaces (cont.)

heating of the surface of the molten metal by radiation. The relative increase in thermal flow to the hearth, achieved in connection with the blowing of air into the uptakes amounts to 2-7%. The most expedient system utilizes air from blast-furnace turbo-blowers with an excess air pressure of 1-2 atm in front of the nozzle at a consumption of compressed air amounting to 1300-1400 nm<sup>3</sup>/hr, the total air consumption through the uptake being 5000 nm<sup>3</sup>/hr. Diagrams of ejectors being employed at plants indicated are shown.

M.Kh.

1. Open hearth furnaces--Operation
2. Open hearth furnaces--Performance
3. Air--Thermal effects
3. Compressed air--Consumption

Card 2/2

BELOV, I.V

PHASE I BOOK EXPLOITATION

1112

Nauchno-tekhnicheskoye obshchestvo energeticheskoy promyshlennosti.  
Tsentral'noye upravleniye. Sektsiya gazifikatsii

Teoriya i praktika szhiganiya gaza; trudy nauchno-tekhnicheskogo soveshchaniya  
(Theory and Practice of Gas Combustion; Transactions of a Scientific and  
Technical Meeting) Leningrad, Gostoptekhizdat, 1958. 343 p. 3,500 copies  
printed.

Ed.: Lyakhovskiy, D.N.; Executive Ed.: Fedotova, M.I.; Tech. Ed.:  
Yashchurzhinskaya, A.B.

PURPOSE: This book is intended for scientists, designing organizations, heat and  
power engineers, and workers in the gas industry and in enterprises using gas fuel.

COVERAGE: This volume contains reports and addresses presented at the Scientific-  
Technical Conference on the Theory and Practice of Gas Combustion. The reports  
deal with the physics of gas fuel combustion, the construction and operation of  
gas burners and the practical use of gas fuel in industrial and power plants.  
References are given at the end of each article.

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Theory and Practice of Gas Combustion (Cont.) 1112

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SOV/137-59-5-9502

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 5, p 3 (USSR)

AUTHOR: Belov, I.V.

TITLE: Characteristics of the Flame of an Open-Hearth Gas Furnace

PERIODICAL: V sb.: Teoriya i praktika szhiganiya gaza, Leningrad, Gostop-  
tekhnizdat, 1958, pp 77 - 93

ABSTRACT: The author presents results of experimental investigations into aerodynamics and processes of burning of the flame in an open-hearth furnace with a Venturi head. The experiments were carried out on models (flame, isothermic-air and hydraulic) and on an operating industrial furnace of 370-ton charge. Combustion processes of the operating furnace were in qualitative agreement with those obtained on the models. It is asserted that in a furnace the reaction zone of the flame practically spreads over the whole height of the smelting space in 2/3 of the pool length, in the absence of technological evolution of gas. In the first third

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SOV/137-59-5-9502

Characteristics of the Flame of an Open-Hearth Gas Furnace

of the pool length the amount of combustible fuel depends mainly on the coefficient of air surplus. In the remaining length, a constant small fraction of the total amount of heat, supplied to the furnace, is burnt, independent of the given coefficient. ✓

N.I.

Card 2/2

BELOV, I.V.; OZHIGANOV, V.S.; SHALAYEV, P.B.

Equipment for dehydrating high-viscous mazuts. Izbor. 1 rats. 3  
no. 4:9-10 Ap '58. (MIRA 11:7)  
(Petroleum as fuel)

SCV/133-58-8-27/30

**AUTHORS:** Belov, I.V., Ozhiganov, V.S. and Shalayev, P.P.

**TITLE:** An Installation for Dehydration of High-viscosity Fuel Oils (Ustanovka dlya obezvozhivaniya vysokovязkikh mazutov)

**PERIODICAL:** Stal', 1958, Nr 8, pp 755 - 758 (USSR)

**ABSTRACT:** An experimental plant for dehydration of fuel oil designed by VNIIMT was erected and operated on the Verkh Isetskiy Works. Dehydration is based on evaporation principle using waste heat of flue gases from one of the open-hearth furnaces. The plant consists of tube pre-heater evaporator, condenser and separator (Figures 1 and 2). The designed plant output 5 t/h of completely dehydrated oil with the initial moisture content of 15%, the initial temperature of the waste gas 500 °C, its throughput 10 000 m<sup>3</sup>/h, thus utilising about 30-35% of the waste heat. The plant is described in some detail. It is stated in the editorial note that the real solution of the problem is fitting the railway tanks with heating elements (indirect steam), but the above scheme can be used temporarily with advantage in some cases. There are 2 figures and 1 table.

Card1/2

An Installation for Dehydration of High-viscosity Fuel Oils

SOV/133-58-8-27/30

ASSOCIATIONS: VNIIMT and Verkh-Isotskiy metallurgicheskiy zavod  
(Verkh-Isotskiy Metallurgical Works)

1. Fuel oils--Dehydration
2. Dehydrators--Design
3. Waste gases--Applications

Card 2/2



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30V/1/10-10-6/55

**AUTHORS:** Belov, I. V. (Candidate of Technical Sciences),  
Vil'nyanskiy, I. Ya., Gluskov, P. G., Krasovskiy, D.  
Ye., Telesov, S. A., Berger, N. I. (Engineers)

**TITLE:** Delivery of Air to Gas Ports by Fan to Intensify the  
Melting Process

**PERIODICAL:** Stal', 1959, Nr 10, pp 889-893 (USSR)

**ABSTRACT:** Partial combustion of gas in the doghouse occurs  
by fan-blown air at an approximate pressure of  
600-mm water column, improving flame characteristics  
and drastically cutting power consumption for air  
blowing (7 to 10 times) in comparison to consumption  
by compressors or turbo-blowers. Blowing equipment  
is simple and provides an easy way of controlling  
air supply. At Stalino and Nizhniye Sergi Metal-  
lurgical Plants (Stalinskiy zavod, Nizhne-Sergin-  
skiy zavod), fan blowing was installed in 1958.

Card 1/4 At Stalino Plant, open-hearth furnaces work by

Delivery of Air to Gas Ports by Fan to  
Intensify the Melting Process

75.003  
SOV/133-59-10-6/59

scrap-ore process with liquid cast iron and are coke-oven gas-fired. In discussing furnace performance figures and temperature rates, the authors compare the new and the original production (see table). The following engineers contributed to the research: Tuluyevskiy, Yu. N., Ofengenden, A. M., Druzhinin, I. I., Nesterovich, R. P., Pokras, L. M., Moyslyevich, G. I., Postnikov, Yu. D., et al. The authors conclude as follows: (1) Partial gas combustion in open-hearth furnace ports by cold air blown into the doghouse is only beneficial with an adequately high level of thermal load. (2) Intensification of the melting process by the above method is recommended for overcharged and, particularly, double-charged furnaces. (3) The forced air/thermal load ratio can be adjusted by controlling temperature rates of the checkers. (4) Automatic control would greatly promote the effectiveness of partial fuel combustion in the ports. There are 4 figures; 1 table; and 2 Soviet references.

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Delivery of Air to Gas Pockets by Pumps  
Intensify the Melting Process

007/11 0412/11

ASSOCIATION: All-Union Scientific Research Institute of Metallurgical Thermal Technology, All-Union Scientific Research Metallurgical Plant (VNIIM, Moscow, USSR), Nizhne-Sergiyevskiy metallurgical plant (Nizhny Novgorod, USSR)

Card 3/4

Delivery of Air to Gas Ports by Fan to  
Intensify the Melting Process

Table  
309/147-0010-4/1

Basic Performance of Figures of Experimental Melting  
Without (numerator) and With (denominator) Air Delivery  
by Fan

Performance Figures	Operating Time, min		
	A	B	C
Number of Melts.....	10	10	10
Melting Period, hrs - min. ...	12:40 5-40	11:10 5-10	10:40 5-00
Mean Thermal Load per Melt, ... 10 <sup>6</sup> cal/h	11.20 10.70	11.10 10.60	11.1 10.6
Furnace Productivity, t/h ....	11.20 10.70	11.10 10.60	11.1 10.6
Arbitrary Fuel Consumption, ... kg/t	11.20 10.70	11.10 10.60	11.1 10.6
Card 4/4			

BURYLEV, Nikolay Gerasimovich; KAVADEROV, A.V., prof., doktor  
tekhn. nauk, retsenzent; BELOV, I.V., red.; BUR'KOV, M.M.,  
red. izd-va; MAL'KOVA, N.T., tekhn. red.

[Thermal conditions of open-hearth furnaces] Teplovye rezhimy  
martenovskikh pechei. Sverdlovsk, Metallurgizdat, 1962. 184 p.  
(MIRA 15:11)

(Open-hearth furnaces)  
(Heat--Transmission)

BELOV, I. V.; VIL'NYANSKIY, I. Ya.

Thermal efficiency, heat receptivity of the metal, and oxidizing capability of open hearth furnaces during oxygen and compressed air feed to the flame. Izv. vys. ucheb. zav.; chern. met. 5 no.12:153-161 '62. (MIRA 16:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy teplotekhniki.

(Open-hearth furnaces—Combustion)

BELOV, I.V.; VIL'NIANSKIY, I.Ya.

Speed of carbon oxidation and the heating of a smelting bath during the finishing period. Izv. vys. ucheb. zav.; chern. met. 6 no.4; 34-38 '63. (MIRA 16:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy teplotekhniki.

(Open-hearth process —Testing)

BELOV, I.V., kand. tekhn. nauk

Calculating the thermodynamic period in open-hearth smelting.  
Stal' 23 no.10:945-947 O '63. (MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy  
teplotekhniki.



BELOV, I. V.; POSTNIKOV, Yu. D.

Heat condition parameters and the aerodynamics of an open-  
hearth furnace fuel spray. Izv. vys. ucheb. zav.; Chern. met.  
7 no.6:156-166 '64. (MIRA 17:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy  
teplotekhniki.

BELOV, I.V.; POSTNIKOV, Yu.B.

Hydraulic resistance of smoke-tight valves and smoke pipes of  
an open hearth furnace. Izv. vys. uchen. zav.; chern. met. 8  
no.2:168-173 '65. (MIRA 18:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy  
teplotekhniki.

NIKOLIN, I.M.; BELEV, I.V.; KONISTAYEV, S.N.; RYJENKO, I.I.;  
SHCHERBIN, D.R.

Cleaning the checkerwork, crusher flies, and smoke flues from  
flue dust during the operation of an open-hearth furnace. Stal.  
25 no.6:566-567 Je '65. 1965

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metalurgicheskoy  
teplotekhniki i Nizhne-Tapil'skiy metallurgicheskiy kombinat.

BELOV, I.V.

Organizational structure of the initial nucleus of a scientific and technological society. NTO 4 no.11:44-45 N '62.

(MIRA 16:1)

1. Zamestitel' predsedatelya Vsesoyuznogo soveta nauchno-tekhnicheskikh obshchestv.

(Technical societies)

BELOV, Ivan Vasil'yevich; ORANZHEREYEVA, Valentina Fedorovna;  
NARTSISSOVA, Nina Vasil'yevna; GAPONOV, Petr Ivanovich;  
BEZDOL'NIY, Konstantin Iosifovich; LUKASHUK, V.A., red.;  
KOROBOVA, N.D., tekhn. red.

[For the aid of Scientific and Technical Society's activist  
group; collected leading materials] V pomoshch' aktivu NTO;  
sbornik rukovodiashchikh materialov. Moskva, Profizdat,  
1963. 422 p. (MIRA 17:3)

BELOV, Ivan Vasil'yevich; VYRYPAYEV, Aleksey Mikhaylovich; POPOV,  
A.S., red.; VLADIMIRSKAYA, L.S., tekhn. red.

[The scientific and technical department of an enterprise in  
the effort to create new machinery] NTO predpriatiia v bor'-  
be za novuiu tekhniku. Moskva, Profizdat, 1964. 78 p.  
(Bibliotekha profsoiuznogo aktivista, no.4(76))

(MIRA 17:3)

BELOV, I.V.

Heat consumption for melting depending on the oxidizing  
properties of an open-hearth furnace. Izv. vys. ucheb.  
zav.; chern. met. 6 no.12:203-211 '63. (MIRA 17:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgi-  
cheskoy teplotekhniki.

BELOV, I.V.; POSTNIKOV, Yu.D.

Effect of the degree of filling of the slag pocket on the  
aerodynamics of the air passage of an open-hearth furnace  
port. Izv. vys. ucheb. zav.; chern. met. 8 no.10:140-145 '65.  
(MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy  
teplotekhniki.



RECEIVED		CLASSIFICATION	
BC			a-2
<p>Mean chemical composition of the gneissoids of the Sayan Mountains, mountain range (granite gneiss, 100% granite) and. And. and U.S.A. (100% granite) and. And. granite, some of them are not identified, and identified in relation to the interest types of granite. U.S. T.</p>			
UZBEK State UNIV.			
ASB-11A METALLURGICAL LITERATURE CLASSIFICATION		CLASSIFICATION	
CLASSIFICATION	CLASSIFICATION	CLASSIFICATION	CLASSIFICATION

BELOV, I. V.

Belov, I. V. "Autometamorphism of alkaline rocks in the Kamnek Nagai complex (Zeravshan Range)", Sto such. Pauch. filiala Akad. nauk SSSR, Issue 7, 1961, pp. 3-4.

SO: U-3043, 11 Marc 63, (Lelopsis 'nykh State, No. 10, 1963).

**BELOV, I.V.**

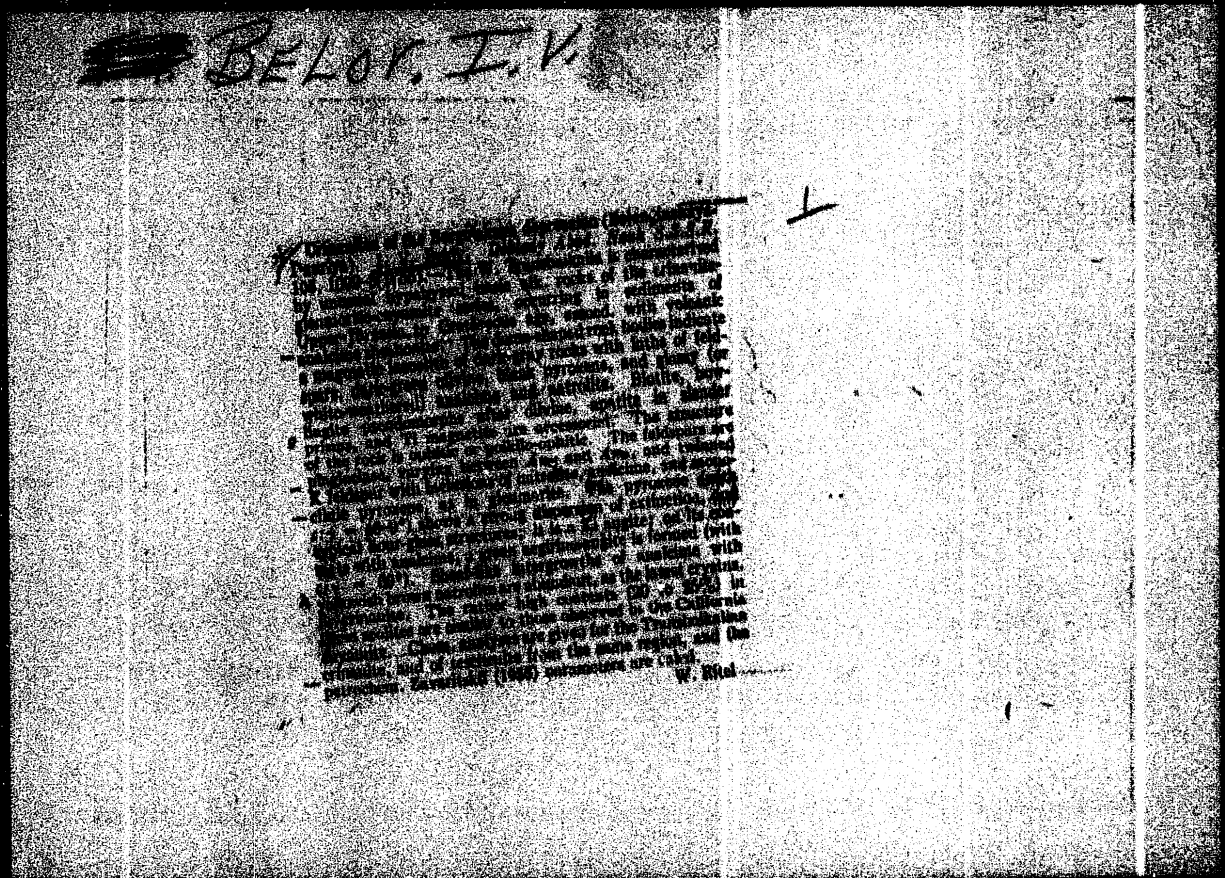
Geological exploration of Tajikistan. Trudy TIAN SSSR 27:21-34 '51.

(MLRA 6:8)

(Tajikistan--Geology) (Geology--Tajikistan)

BELOV, I. V.

Data on volcanism in southern Yakutia. Trudy Vost.-Sib.fil.AN SSSR.  
Ser.geol. no.1:70-84 '54. (MIRA 8:12)  
(Yakutia--Volcanoes)



ILLEGIBLE

BELOV, I.V.

Shoshonites of the Borgoyanskaya Depression. Izv. AN SSSR. Ser. geol. 21  
no. 7:102-107 J1 '56. (MIRA 9:10)

1. Vostochno-Sibirskiy filial Akademii nauk SSSR, Institut geologii,  
Irkutsk.

(Borgoyanskaya Depression--Shoshonite)

**BELOV, I.V.**

Principal results of the Conference on Metallogeny of Western  
Transbaikalia. Izv. vost. fil. AN SSSR no.1:142-143 '57.  
(Transbaikalia--Ore deposits) (MIRA 11:4)



TKACHUK, V.G., otv.red.; PAL'SHIN, G.B., red.; BELOV, I.V., red.;  
SHOTSKIY, V.P., red.; TERLOVICH, B.F., red.; MISNIKOV, V.V.,  
tekhn.red.

[Materials for the young scientists' conference dedicated to  
the 10th anniversary of the West Siberian Branch of the  
Academy of Sciences of the U.S.S.R.] Materialy k konferentsii  
molodykh nauchnykh sotrudnikov; k 10-letiiu Vostochno-Sibirskogo  
filiala AN SSSR. Irkutsk. No.1. [Geology and geography]  
Geologiya i geografiya. 1958. 153 p. (MIRA 10:13)

1. Akademiya nauk SSSR. Vostochno-Sibirskiy filial, Irkutsk.  
(Siberia, Western--Geology) (Siberia, Western--Geography)

BELOV, I.V., otv. red.

[Transactions of the Interdepartmental Conference on the Metallogeny of Western Transbaikalia]. Trudy Mezhdomstvenno-go soveshchaniia po metallogenii Zapadnogo Zabaikal'ia. Irkutsk, AN SSSR, 1958. 304 p. (MIRA 16:9)

1. Mezhdomstvennoye soveshchaniye po metallogenii Zapadnogo Zabaykal'ya. 1st, Irkutsk, 1956.  
(Transbaikalia--Geology)

BELOV, I.V.

Lavas of the Dshida volcanoes. Izv. Sib. otd. AN SSSR no.4:33-44  
'58. (MIRA 11:9)

1.Vostochno-Sibirskiy filial AN SSSR.  
(Dshida Valley--Lava)

AUTHOR: Belov, I.V.

11-58-7-5/12

TITLE: On the Facial Subdivision and the Chemical Composition of Rocks in the Trachibasaltic Formation of the Sayan-Baykal Mountainous Oblast' (O fatsial'nom raschlenenii i khimicheskom sostave porod trakhibazal'tovoy formatsii Sayano-Baykal'skoy gornoj oblasti)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, 1958, Nr 7, pp 76-91 (USSR)

ABSTRACT: Intermountainous Cenozoic areas of the Sayan-Baykal Oblast are situated in its northern and north-western part. The original tectonic development of the region at the end of Mesozoic and during the Cenozoic periods caused the accumulation of continental sedimentary and sedimentary-volcanogenic complexes in the depressions and the accumulation of powerful volcanogenic basaltic formations in the anticlines, from which the sedimentary rocks of this period were absent. The author distinguishes among these rocks three facies: pyroclastic, blanket and subvolcanic. Lately, this region has been the object of detailed studies by the following geologists: N.A. Fiorenskiy, M.L. Lur'ye, G.V. Obruchev, V.N. Iodochnikov, E.Ye. Fedorov, I.P. Rachkovskiy, G.A. Ietedeva, P.A. Kropotkin,

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11-58-7-5/12

On the Facial Subdivision and the Chemical Composition of Rocks in the Trachibasaltic Formation of the Sayan-Raykal Mountainous Oblast

N.V. Loskutova, A.N. Zavarnitskiy, Ye.P. Moldavantsev, Ye.A. Nechayeva, V.K. Kotul'skiy, S.D. Sher, L.I. Salop, A.A. Konev, V.A. Lisiy, I.V. Belov, A.A. Arsen'yev, and others. The rocks of the pyroclastic and blanket facies are distinctly divided into 2 age groups, Tertiary and Quaternary. The age of the trachibasaltic rocks of the volcanogenic facies have been defined as post-Lower Cretaceous. They were not found in the group of the Tertiary age. Pyroclastic rocks were found in many sites of the region. During a detailed study of the region numerous formations of basaltic tuffs and pyroclastic ejections were found. These rocks preceded the outflow of Tertiary basalts. In the Tunka depression, deep drilling showed that there were two phases of the Cenozoic volcanic activity: one at the end of the Tertiary, and the other during the Quaternary period. The beginning of both phases was accompanied by violent explosive activity and the formation of the pyroclastic strata. The author gives a detailed description of various formations of this type found in different parts of the region. The blanket (pokrovnaya) facies of rocks formed by the basaltic magma can be divided in two age groups, Tertiary rocks, called

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11-58-7-5/12

On the Facial Subdivision and the Chemical Composition of Rocks in the  
Trachibasaltic Formation of the Sayan-Baykal Mountainous Oblast'

plateaubasalts, and Quaternary rocks, formed by basaltoid lava. When found in depressions and river valleys, they are called dalebasalts. The Tertiary basalts are chiefly composed of olivine, plagioclase, pyroxene, ore-mineral, zeolites, and peculiar alumo-silicates of the palagonite type. The Quaternary trachibasaltic rocks are composed of olivine trachibasalts, analcime basalts, various lavas related to "shikhlunites", pyroxene and plagioclastic basalts. The volcanogenic rocks are of exceedingly variegated composition; black magmatic basaltoid rocks, glomeroporphyric accumulation of olivine, monoclinical pyroxene, teschenites, essexite diabases, proterobases and camptonites, lakkolites and many other varieties of volcanogenic rocks (Ref. 1,9,15,18 and 24). Their age has not been defined exactly. The chemical composition of the Cenozoic magmatic rocks of the Sayan-Baykal oblast' can be divided in three series (Table 5 and 6): 1) a series of trachibasalts - sodium "shikhlunites" (this series is represented by alkaline rocks, composed of olivine, basic plagioclase, titanium-augite, potash feldspar); 2) a series of essexite-crinanite-limburgites (Variegated rocks of this series belong to the sub-alkaline and al-

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11-58-7-5/12

On the Facial Subdivision and the Chemical Composition of Rocks in the  
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kaline varieties); 3) a series of olivine basalts (Plateau-basalts) is a typical representative of calcareous - alkaline lava varieties of the region (Olivine, plagioclase, palagonite, carbonatite and zeolite basalts). Thus, the average composition of basic lavas of the Sayan-Baykal oblast' testifies that, on the whole, all rock formations are of trachibasaltic type, and that this association of Cenozoic rocks cannot be compared with other basalt formations of the world. The earliest Tertiary lavas of the region are calcareous-alkaline types and slightly differentiated, and the Quaternary lavas and the rocks of the subvolcanic facies are of alkaline and sodium type. There are 6 tables, 2 diagrams and 25 Soviet references.

1. Geology - USSR    2. Rock - Chemical analysis

SUBMITTED: March 11, 1957  
ASSOCIATION: Vostochno-Sibirskiy filial AN SSSR, Institut geologii, Irkutsk  
(The Geological Institute of the East-Siberian Branch of the  
AS USSR, Irkutsk)  
Card 4/4

BELOV, I.V.

Mesozoic and Cenozoic igneous formations in the Baikal subplatform zone. Zap.Vost.-Sib.otd.Vses.min. ob-va no.1:3-21 '59.

(MIRA 14:7)

1. Institut geologii Vostochno-Sibirskogo filiala AN SSSR.  
(Baikal Lake region--Rocks, Igneous)



BELOV, I.V.

Cenozoic basalt formation in the Baikal region and general problems relative to the chemical composition of principal formations of the world. Geol. i geofiz. no.3:25-38 '60. (MIRA 13:9)

1. Vostochno-Sibirskiy geologicheskii institut Sibirskogo otdeleniya AN SSSR.

(Baikal region--Basalt)

(Magma)

BELOV, I.V.; DANILOVICH, V.N.; SOLONENKO, V.P.; TRESKOV, A.A.;  
FLORENCOV, N.A.

Professor Mikhail Mikhailovich Odintsov; on his 50th birthday.  
Geol.i geofiz. no.12:137-138 '61. (MIRA 15:5)  
(Odintsov, Mikhail Mikhailovich, 1911-)

BELCV, I.V.

Diabase-granophyre complex of rocks from the Aban hole (southwestern part of the Siberian Platform). Trudy Vost.-Sib.fil.  
AN SSSR no.16:109-129 '61. (MIRA 14:7)  
(Siberian Platform--Diabase) (Granophyres)

BELOV, Ivan Vasil'yevich; SOBOLEV, V.S., akademik, otv. red.;  
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[Trachybasalt formation in the Lake Baikal region] Trakhi-  
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nauk SSSR, 1963. 371 p. (MIRA 16:7)  
(Baikal Lake region--Trachybasalt)

VLADIMIROV, Boris Mikhaylovich; BELOV, I.V., otv.red.; PERLOVICH, B.F., red.;  
SHAFIROVA, A.S., red.; PECHERSKAYA, T.I., tekhn.red.

[Petrography of Padun and Margudol' trap intrusives] Petrografiia  
Padunskogo i Margudol'skogo trappovykh intrusivov. Irkutsk, Irkutskoe  
knizhnoe izd-vo, 1962. 150 p. (Akademiia nauk SSSR. Sibirskoe otделение.  
Vostochno-Sibirskii geologicheskii institut. Trudy, no.10)  
(MIRA 16:3)

(Irkutsk Province--Rocks, Igneous)

KONEV, Aleksey Andreyanovich; BELOV, I.V., otv.red.; SEPPING, N.G., red.;  
PERLOVICH, B.F.; PONOMAREVA, A.V., tekhn.red.

[Petrography of alkali ultrabasic and basic rocks in the Sayzha and  
Gulken plutons (Vitim Plateau)] Petrografiia shchelochnykh  
ul'traosnovnykh i osnovnykh gornykh porod Saizhinskogo i Gulkhenskogo  
plutonov (Vitimskoe ploskogorie). [Irkutsk] Irkutskoe knizhnoe izd-vo,  
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Sibirskii geologicheskii institut. Trudy, no.11)

(MIRA 16:4)  
(Vitim Plateau--Rocks, Sedimentary)

BELCV, Ivan Vasil'yevich, kand. ekon. nauk (1954); BORDAKOV, Ivan  
Yefimovich, kand. tekh. nauk, (1954); VIKTORCHENKO  
Nikolay Gavrilovich, kand. ekon. nauk (1954); KASHKIN  
Grigoriy Simeonovich, kand. KHANIKOV, Yevgeniy Ivanovich,  
doktor ekon. nauk, prof., (1954); KASHKIN, Nikolay Fedorovich,  
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[Economics of railroad and street car] Ekonomika zhелеz-  
нодорожного transporta. Moskva, transport, 1954. 114 p.  
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AFANAS'YEV, G.D., otv. red.; BELOV, I.V., otv. red.

[Petrography of Eastern Siberia] Petrografia Vostochnoi  
Sibiri. Moskva, Nauka. Vol.3. 1965. 314 p.  
(MIRA 18:7)

1. Akademiya nauk SSSR. Sibirskoye otdeleniye. Institut  
zemnoy kory. 2. Chlen-korrespondent AN SSSR (for  
Afanas'yev).



BELOW, K.

Out-of-town session of the learned councils of the All-Union Petroleum Research Institute for Geological Survey and All-Union Instrument Research Institute held in Stavropol. Geol.nefti i gasa ; no.10:55-3 of cover 0 '59.  
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1. Stavropol'skiy sovmarkhoz.  
(Caucasus, Northern--Petroleum geology)  
(Caucasus, Northern--Gas, Natural--Geology)

SHAMONOV, P.; MATYAGIN, D., inzhener; BELOV, K., rabochiy

Let's renew contacts between workers of the United States and the U.S.S.R. Sov. profsoiuzy 7 no.17:48-50 S '59. (MIRA 12:11)

1. Predsedatel' zavkoma zavoda "Krasnyy proletariy" (for Shamonov).
2. Zavod "Krasnyy proletariy" (for Matyuagin, Belov).
  - (Russia--Relations (General) with United States)
  - (United States--Relations (General) with Russia)
  - (Trade unions)

4"

SUNDUK'YAN, Grigoriy Stepanovich; BELOV, Konstantin Aleksandrovich; BLYU-  
MENTAL', Samuil Yefimovich [deceased]; KRYUCHKOV, S.M., red.; PAV-  
LOVA, A.S., red. izd-va; FOMICHEV, P.M., tekhn. red.

[Manual on the procurement of raw animal products and pelts] Poso-  
bie dlia zagotovitelja zhivotnovodcheskogo syr'ia i pushniny. Mo-  
skva, Izd-vo TSentrosoiuza, 1961. 299 p. (MIRA 14:11)  
(Animal products)

BELOV, K.

Insufficient training is a great evil. Grazhd. av. 22 no.11:  
24-25 N '65. (MIRA 18:12)

1. Starshiy pilot-inspektor Ministerstva grazhdanskoy aviatsii.

CA

21

Preparation of low-boiling phenols from low temperature carbonization tar. M. Kuznetsov and K. Bekov. *Khim. Tverdogo Topliva* 4, 502 (1963). A fraction of a primary tar from the low-temp. carbonization of the long-flame Liskhansk coals contained 50% phenols composed of 15% cresols, 15% xylenols and 70% of a mixt. of higher-boiling homologs. Various hydrogenation expts. are reported, although best results were obtained with  $H_2O$  instead of  $H_2$ , i.e., 40%, 50% and 51.9% yields of fractions b. below 210°. The process was carried out in the presence of  $Al(OH)_3$  at 175 atm. and 470°. A. A. B.

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

ABSTRACTS

CLASSIFICATION

ABSTRACTS

ABSTRACTS

ABSTRACTS

ABSTRACTS

**Separation of naphthalene and anthracene from vapors**  
I. S. K. Kukushkin and K. A. Rylov, *Coke and Chem. Eng. USSR*, 6, No. 11, 45 (1962). Coll. 10 and anthracene are deposited at cooled surfaces from the vapor, together with other aromatic products. The oil HCO most rapidly separates on keeping, and 10% is obtained by pressing the product so obtained (ca. 1 kg. per cm<sup>2</sup>). The expressed oil contains 1.6% 10 and 1.5% BCA.

*Ka*

Distillation of tar in tube stills M. I. Kuznetsov and  
K. A. Belykh. *Coke and Chem. (U.S.S.R.)* 6, No. 12,  
pp. 321(1960); *Chemie & Industrie* 38, 671. -A study of  
the possible pyrolysis of tar during its distn. in tube  
stills. Sepd. tar fractions (heavy, anthracenic) reheat  
well, even to heating at 400° for 20 min. On the other  
hand, if the tar is heated in the autoclave for the same  
time at 350-75° there is a considerable increase in free  
C; but deep-seated pyrolysis of the tar commences only  
at 500° after 1 hr.'s heating. When tar is heated in  
tubular systems up to 400° no perceptible pyrolysis takes  
place. A.P.C.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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RECORD NO.

SECTIONS MAY ONLY USE

ILLUSTRATIONS

MAILED BY

21

Increasing the water resistance of coal briquets composed with sulfite cellulose waste liquor. A. A. Rejch and G. B. Kagan. *Khim. Khim. Zash.* 11, 254 (1936).—The wastes contg. 7% solids and 40%  $H_2O$  were evap. under vacuum to give a soln. of 40% solids and 60% liquid. This soln. was boiled for 2 hrs. with  $Fe(OH)_3$ ,  $Al(OH)_3$ , limeite in kaolin and compressed with coal or coke breeze into briquets which were dried at 140–150° for 2–3 hrs. Such briquets are water resistant, do not crack in fire, and retain their strength even after immersion in water for 48–72 hrs. B. Z. Kamich

H. Z. Karnik

FROM: 11X/01178

9. 2013. 10. 10. 14: 00

## Discussion

1994: 900-919

2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 2681, 26



1ST AND 2ND ORDERS										PROCESSES AND PROPERTIES INDEX										3RD AND 4TH ORDERS									
<p>CO</p> <p>21</p> <p>A new method of separating naphthalene and anthracene. K. A. Reiz, Tekhnika 1936, No. 21, 4.—The proposal of Kuznetsov to cool coal tar vapor fractions with H<sub>2</sub>O in direct-action app. has been tested. Naphthalene and anthracene are sepd. from the oily distillates accompanying them. The quality of the products obtained is normal. H. V. Shvartsberg</p>																													
<p>COMMON LITERATURE</p> <p>ASME 35.4 METALLURGICAL LITERATURE CLASSIFICATION</p> <p>SECTION 35.4.1</p> <p>SECTION 35.4.2</p> <p>SECTION 35.4.3</p> <p>SECTION 35.4.4</p> <p>SECTION 35.4.5</p> <p>SECTION 35.4.6</p> <p>SECTION 35.4.7</p> <p>SECTION 35.4.8</p> <p>SECTION 35.4.9</p> <p>SECTION 35.4.10</p> <p>SECTION 35.4.11</p> <p>SECTION 35.4.12</p> <p>SECTION 35.4.13</p> <p>SECTION 35.4.14</p> <p>SECTION 35.4.15</p> <p>SECTION 35.4.16</p> <p>SECTION 35.4.17</p> <p>SECTION 35.4.18</p> <p>SECTION 35.4.19</p> <p>SECTION 35.4.20</p> <p>SECTION 35.4.21</p> <p>SECTION 35.4.22</p> <p>SECTION 35.4.23</p> <p>SECTION 35.4.24</p> <p>SECTION 35.4.25</p> <p>SECTION 35.4.26</p> <p>SECTION 35.4.27</p> <p>SECTION 35.4.28</p> <p>SECTION 35.4.29</p> <p>SECTION 35.4.30</p> <p>SECTION 35.4.31</p> <p>SECTION 35.4.32</p> <p>SECTION 35.4.33</p> <p>SECTION 35.4.34</p> <p>SECTION 35.4.35</p> <p>SECTION 35.4.36</p> <p>SECTION 35.4.37</p> <p>SECTION 35.4.38</p> <p>SECTION 35.4.39</p> <p>SECTION 35.4.40</p> <p>SECTION 35.4.41</p> <p>SECTION 35.4.42</p> <p>SECTION 35.4.43</p> <p>SECTION 35.4.44</p> <p>SECTION 35.4.45</p> <p>SECTION 35.4.46</p> <p>SECTION 35.4.47</p> <p>SECTION 35.4.48</p> <p>SECTION 35.4.49</p> <p>SECTION 35.4.50</p> <p>SECTION 35.4.51</p> <p>SECTION 35.4.52</p> <p>SECTION 35.4.53</p> <p>SECTION 35.4.54</p> <p>SECTION 35.4.55</p> <p>SECTION 35.4.56</p> <p>SECTION 35.4.57</p> <p>SECTION 35.4.58</p> <p>SECTION 35.4.59</p> <p>SECTION 35.4.60</p> <p>SECTION 35.4.61</p> <p>SECTION 35.4.62</p> <p>SECTION 35.4.63</p> <p>SECTION 35.4.64</p> <p>SECTION 35.4.65</p> <p>SECTION 35.4.66</p> <p>SECTION 35.4.67</p> <p>SECTION 35.4.68</p> <p>SECTION 35.4.69</p> <p>SECTION 35.4.70</p> <p>SECTION 35.4.71</p> <p>SECTION 35.4.72</p> <p>SECTION 35.4.73</p> <p>SECTION 35.4.74</p> <p>SECTION 35.4.75</p> <p>SECTION 35.4.76</p> <p>SECTION 35.4.77</p> <p>SECTION 35.4.78</p> <p>SECTION 35.4.79</p> <p>SECTION 35.4.80</p> <p>SECTION 35.4.81</p> <p>SECTION 35.4.82</p> <p>SECTION 35.4.83</p> <p>SECTION 35.4.84</p> <p>SECTION 35.4.85</p> <p>SECTION 35.4.86</p> <p>SECTION 35.4.87</p> <p>SECTION 35.4.88</p> <p>SECTION 35.4.89</p> <p>SECTION 35.4.90</p> <p>SECTION 35.4.91</p> <p>SECTION 35.4.92</p> <p>SECTION 35.4.93</p> <p>SECTION 35.4.94</p> <p>SECTION 35.4.95</p> <p>SECTION 35.4.96</p> <p>SECTION 35.4.97</p> <p>SECTION 35.4.98</p> <p>SECTION 35.4.99</p> <p>SECTION 35.4.100</p>																													

36		B-7-2	
<p>Mechanical coating of coal-tar pitch. K. A. Buzan (Ukrain. Chem. J., 1937, 12, 407-411).—The molten pitch is poured into metal moulds (Fe, steel, brass, Al) cooled in H<sub>2</sub>O. H. T.</p>			
438.514 METALLURGICAL LITERATURE CLASSIFICATION			
LARGE #2		COLLECTOR	



**Recovery of volatile products of coking, at high pressure.** A. A. Belyuz and V. V. Dybskiy (*Chem. Eng. Comm. USSR*, 1968, No. 7, 714). The coeff. of absorption of  $C_2H_6$  in molar oil varies with pressure according to  $k = A(1 + p)^n$ , where  $A$  is a const. and  $n$  the pressure in atm., for practical purposes  $p$  should be not greater than 7. Scrubbing the coking gas with  $H_2O$  at 45° and 2.75 atm. lowers the  $C_2H_6$  content to 0.05-0.1 g./cu. m. Detn. of equal. const. of H<sub>2</sub>S over aq. Na<sub>2</sub>CO<sub>3</sub> shows that little further elimination of H<sub>2</sub>S is achieved by raising the pressure above 4.5 atm. Solns. satd. with H<sub>2</sub>S may be regenerated by passing CO<sub>2</sub> or air, by boiling, or, preferably, by aerating the boiling soln. H. C. P. A.

101 APR 1970 000000		PROCESSED AND DISPOSED INDEX	
COMMON ELEMENTS		COMMON VARIABLE INDEX	
<p><i>Co</i></p> <p><b>Effect of water and other admixtures on the crystallization of naphthalene from the gas phase.</b> S. S. Ursova'ski, K. A. Bely and V. V. Diba'kil. <i>Ukrain. Khim. Zh.</i> 13, 50-55 (1968).—The effects of water, benzene and phenol on the crystn. of <math>C_{10}H_8</math> were investigated. Water was found to have a pos. effect on the crystal growth. By increasing water vapor concn. to 0.17 g./l. the no. of crystals less than 300 <math>\mu</math> rises from 1 to 25% of the total crystals. A further increase in water vapor concn. causes a decrease in crystal size. Addn. of various concns. of benzene, phenol and water resulted in formation of distorted crystals. In general, the effect of the admixt. on the crystal growth is governed by the differences between the free surface energies of the crystal in the presence and absence of the admixt. If the difference is pos. the admixt. impedes the crystal growth and if neg., the crystal grows. B. Z. Kamich</p>		2	
ASD-51A METALLURGICAL LITERATURE CLASSIFICATION			
FROM SYNDICATE		FROM BOWLING	
100000 #10 000 000		000000 #10 000 000	
100000 #10 000 000		000000 #10 000 000	

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
<p><i>CA</i></p> <p>The absorption of benzene under pressure. K. A. Bekry. <i>Coke and Chem.</i> (U. S. S. R.) 11, No. 5, 21-3 (1941); <i>Chem. Zvest.</i> 1943, 1, 1953-4. Expts. on the absorption of <math>C_6H_6</math> from coke-oven gas were made in a pilot plant consisting of a tower of 85 mm. inner diam. and a height of 2500 mm. and the following results were obtained: (1) the absorption coeff. is independent of the initial <math>C_6H_6</math> concn. in the gas, (2) pressure has no effect on the absorption coeff. at practically const. gas velocity, but for design purposes it must be considered that the absorption coeff. decreases with increasing pressure if the quantity of gas which flows at const. speed is considered at normal pressure, (3) a packed column is preferable to a plate column, (4) absorption of <math>C_6H_6</math> by oil at 10 atm. pressure in a plate column resulted in wash-oil satn. of 20-21%, and a loss of <math>C_6H_6</math> in the exit gas of 1.2-1.3 g./cu. m. (normal conditions). The consumption of oil and steam for distn. is reduced to <math>1/10</math> and the <math>C_6H_6</math> loss is reduced by 35-40% if a pressure of 10 atm. is maintained on the absorption column.</p> <p style="text-align: right;">Hans Schindler</p> <p style="text-align: right;">2/</p>																			
<p>ASS. SLA METALLURGICAL LITERATURE CLASSIFICATION</p> <p>GROUP 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20</p> <p>SECTION 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20</p> <p>SUBSECTION 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20</p>																			

1ST AND 2ND GROUPS										PROCESSING AND PROPERTIES INDEX										3RD AND 4TH GROUPS									
										21																			
COMMON ELEMENTS										<p><b>High-temperature coking of Middle Asiatic coals.</b> G. I. Deshailat and K. A. Belov. <i>Trudy Khark'ev. Khim.-Tekhnol. Inst. im. S. M. Zhukova</i> No. 4, 60-9(1944). Characteristics of various Uzbekistan coals and satisfactory results of semiindustrial-scale coking and enrichment are given.</p> <p style="text-align: right;">N. Thon</p>										COMMON ELEMENTS									
MATERIALS DATA										<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>										<p>82-72-12</p>									
SECOND STAGE										SECOND HIT ONLY ONE										SUBSTITUTE									
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PROCEEDINGS AND PROPERTIES INDEX

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Semicoking of Middle Asiatic coals. K. A. Belov.  
*Trudy Khark'kov. Khim.-Tekhnol. Inst. im. S. M. Kidner*  
No. 4, 70-7(1944). Lab.-scale semicoking of Kok-Yangak  
coal yielded 7.5-8.0% primary tar contg. 40% phenols  
of which 15-25% were low boiling (180-202°) and are  
suitable for condensation with HClO<sub>4</sub>. The strongly  
oxidized Kizil-Kiya coal gave only 0.95% tar contg.  
10% phenols; CO<sub>2</sub> content in the gas was up to 60%.  
N. Thon

ASAC-SLA METALLURGICAL LITERATURE CLASSIFICATION

SECOND HALF ONLY ONE

RESEARCH DIVISION

RESEARCH DIVISION



1ST AND 2ND GROUPS		PROCESSES AND PROPERTIES INDEX		10TH AND 11TH GROUPS	
pa				21	
<p>Composition of the phenols of some Middle Asiatic coals and their use in the production of plastics. K. A. Belay and E. M. Voronin. <i>Trudy Khim. Khim. Tekhnol. Inst. im. S. M. Kirova</i> No. 4, 78-80(1944).—The tricresol fraction (b. 180-202°) of the tar of Kok-Yangak and Tash-Kumyr coals (10.7-20.8% and 33.4-36.1%, resp., of the raw phenols) contains 33.8-35.6% o-cresol, 34.1-38.4% m-cresol, and 27.8-31.2% p-cresol. The tricresol, washed with water, was refluxed for 2 hrs. at 50-60° with an equal amt. of 40% HCHO in the presence of some 1% soln. of <math>K_2CO_3</math>; the lower layer, dried at 60°, hardened to a transparent brown mass insol. in acids, alkali, alc., and ether. Only <math>K_2CO_3</math> was effective as catalyst; NaOH and <math>Na_2CO_3</math> were not. N. Thon</p>					
ASB-51A METALLURGICAL LITERATURE CLASSIFICATION					
MATERIALS INDEX					
11TH AND 12TH GROUPS					

0000, R-11

Fuel Abstracts  
Vol. XV, No. 2  
Feb. 1954  
By-Products of  
Carbonization and  
Gasification.

1259. TREATMENT OF CHEMICAL PRODUCTS OF CARBONISATION. (PERERABOTKA  
KHIMICHESKIH PRODUKTOV KOKSOVANIYA). Belov, I.A. ~~Prilozhenie~~  
Metallurgizdat, 1949, 272p.; title in Chem. Abstr., 1953, vol. 47, 9596).

11/13/54  
800

Name BELOV, Konstantin Alekseyevich  
Dissertation Study of Processes of Collection  
Benzene Hydrocarbons and Refining of  
Gas under Pressure in Coal-Tar Chem  
Plants  
Degree Doc Tech Sci  
Affiliation [not indicated]  
Defense Date, Place 28 Mar 55, Council of Khar'kov  
Polytechnical Inst imeni Lenin  
Certification Date 29 Dec 56  
Source BMVO 7/57

68-58-2-13/21

AUTHORS: Belov, K.A., Doctor of Technical Sciences and  
Zeligman, N.A., Candidate of Economic Sciences

TITLE: On the Problem of the Choice of Method of Purification  
of Gas from Hydrogen Sulphide in Coke Oven Works Situated  
in the Southern USSR (K voprosu o vybore metoda ochistki  
gaza ot serovodoroda na koksokhimicheskikh zavodakh yuga  
SSSR)

PERIODICAL: Koks i Khimiya, 1958, Nr 2, pp 52 - 53 (USSR)

ABSTRACT: This is a contribution to the discussion on the problem  
on the pages of this journal (1957, Nr 5, pp 47-50 and Nr 6,  
pp 48 - 51). The present authors pointed out that the  
opposite conclusions as to the cost of cleaning gas by vacuo-  
carbonate and arsenical methods reached by the authors of  
previous papers is due to the different approach of the  
respective authors to the analysis and interpretation of  
reported data, which underlines the necessity of considering  
costs taking into consideration local conditions. The authors  
consider the vacuo-carbonate method as the simpler one and  
cheaper in operation, but this does not exclude the possibility  
that under certain conditions the arsenical method can be more  
advantageous.

Card1/2

68-58-2-13/21  
On the Problem of the Choice of Method of Purification of Gas from  
Hydrogen Sulphide in Coke Oven Works Situated in The Southern USSR

ASSOCIATION: Khar'kovskiy politekhnicheskii institut imeni  
V.I. Lenina (Kharkov Polytechnical Institute  
imeni V.I. Lenin)

AVAILABLE: Library of Congress

Card 2/2

1. Gases - Purification
2. Hydrogen sulfide -  
Elimination
3. Coal gas - Purification

BELOV, Konstantin Alekseyevich; LAZORIN, Serafim Nikolayevich;  
GREBENNIK, P.I., otv.red.; LIBERMAN, S.S., red.izd-va;  
ANDREYEV, S.P., tekhn.red.

[Intensification of recovery processes in the benzene  
sections of by-product coking plants] Intensifikatsia  
raboty benzol'nykh otdelenii na koksokhimicheskikh zavodakh.  
Khar'kov, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvet-  
noi metallurgii, 1959. 141 p. (MIRA 12:8)  
(Coke industry--By-products) (Benzene)

LITVINENKO, Mikhail Semenovich; BELOV, K.A., otv.red.; LIBERMAN, S.S.,  
red.izd-va; ANDREYEV, S.P., tekhn.red.

[Removal of hydrogen sulfide from coke-oven gas; vacuum-  
carbonate method. Khar'kov, Gos.nauchno-tekhn.izd-vo lit-ry  
po chernoi i tsvetnoi metallurgii, 1959. 304 p. (MIRA 12:11)  
(Coke-oven gas) (Hydrogen sulfide)

BELOV, K.A.; LAZORIN, S.N.

New industrial layout for the production of ammonium sulfate at by-product coking plants. Koks i khim. no.?:  
46-48 '60. (MIRA 13:7)

1. Khar'kovskiy politekhnicheskii institut (for Belov).
2. Ukrainskiy uglekhimicheskii institut (for Lazorin).  
(Ammonium sulfate)  
(Coke industry--By-products)



Z/011/61/018/002/011/013  
E112/E153

**AUTHORS:** Belov, K.A., and Volkova, O.V. and others.

**TITLE:** Manufacture of detergents from the condensates of  
Sebelin natural gas

**PERIODICAL:** Chemie a chemická technologie, Přehled technické a  
hospodářské literatury. Vol.18, No.2, 1961, page 83.  
Abstract Ch 61-1134 (Khim. Tekhnol. Topliva, 1960,  
VIII, Vol.5, No.8, pp.34-37).

**TEXT:** The high-boiling fraction of the condensate contains  
mostly naphthenes and aliphatic hydrocarbons. It contains about  
10% of aromatic hydrocarbons. The fraction is first separated from  
unsaturated and aromatic hydrocarbons and then chlorosulfonated.  
The sulphonyl chlorides are saponified with alkali. Surfactants  
are produced which may find applications in many fields.  
5 tables, 8 lit.references.

[Abstractor's note: This is a complete translation.]

Card 1/1

EFLOV, K.A.; ZAYCHENKO, V.M.

Coking uncrushed gas coals. Koks i khim. no.8:6-9 '61.  
(MIRA 15:1)

1. Khar'kovskiy politekhnicheskii institut.  
(Coke)

BELOV, K.A.; ZAYCHENKO, V.M.; ARONOV, S.G.; TYUTYUNNIKOV, Yu.B.;  
TSEPURIT, V.Ya.

Coking of Donets Basin gas coals of a large screen composition.  
Koks i khim. no.12:10-13 '62. (MIRA 16:1)

1. Khar'kovskiy politekhnicheskii institut (for Belov, Zaychenko).
2. Ukrainskiy uglekhimicheskii institut (for Aronov, Tyutyunnikov, Tsepurit).

(Donets Basin—Coal)

(Coke industry)

S/068/62/000/001/001/002  
E071/E435

AUTHORS: Belov, K.A., Lazorin, S.N.

TITLE: A new technological scheme for a benzole plant on a coking works

PERIODICAL: Koks i khimiya, no.1, 1962, 43-45

TEXT: The main deficiencies of benzole recovery and rectification plants used at present are: 1) insufficient denaphthalizing of the coke oven gas, particularly in absorbers operating with creosote oil; 2) low efficiency of the benzole distillation columns, as a result of which only about 40% of the available resin forming substances of the raw benzole are passed into the heavy benzole fraction and utilised for the production of indine coumarone resins. About 30% of the resin forming substances pass into the light benzole fraction and are lost for further processing; 3) high steam consumption for the process of recovery and subsequent distillation of benzene. The use of pipe furnaces for heating oil before benzene desorption can reduce considerably the consumption of steam used for desorption and results in a more complete removal of naphthalene, permitting the use of debenzolized oil as a heat transfer medium for the

Card 1/2

A new technological scheme ...

S/068/62/000/001/001/002  
E071/E435

rectification of raw benzole. For this purpose, the following technological scheme is proposed: saturated oil is passed through a heat exchanger and condenser into the convection part of a pipe furnace from which it is passed into an evaporator at a temperature of  $140^{\circ}\text{C}$ . Gases and vapours evolved in the evaporator are passed into a column for separating the head fraction; a part of the condensed head fraction is used as a reflux in the column, while the remaining part is passed into storage. The oil freed from the main part of the light compounds and sulphurous compounds is passed from the evaporator into the radiation part of the tube furnace where it is preheated to 180 to  $200^{\circ}\text{C}$  and then passed to the feeding plate of a distillation column. At this temperature the consumption of steam for distilling-off benzole is reduced to 1 kg/kg of raw benzole. Moreover, the debenzolized oil is used as a heat-transfer medium in rectification columns and in the evaporator. There are 1 figure and 1 table.

ASSOCIATIONS: Khar'kovskiy politekhnicheskii institut (Khar'kov Polytechnical Institute) K. A. Belov  
UKhIN. S.N. Lazarin

Card 2/2

TURNBULL, W.D.; STEINBERG, D.L.; STEINBERG, D.L.; STEINBERG, D.L.; STEINBERG, D.L.; STEINBERG, D.L.

14-00000  
14-00000

1. Submitted February 19, 1964.

WILLIAM

TOLMACHEV, V.S.; ~~BELOW~~, K.A.

Greater use of local gas reserves. Gas.prom.no.5:8-9 My '56.  
(MLRA 10:1)  
(Gas, Natural)

BELOV, K.A.

Introducing progressive methods for the exploration of gas deposits.  
Gas.prom. no.11:6-9 N '56. (MLBA 9:11)  
(Gas, Natural)



BELOV, K.A.

Bringing-in and operating high-producing gas wells. Gaz.prom.  
no.12:1-5 D '57. (MIRA 11:1)  
(Gas wells)

S/009/60/000/004/001/004  
B027/B076

AUTHOR: Belov, K. A.

TITLE: Geological Prospects of Discovery of New Oil and Gas Fields  
in the Stavropol' Region and in the Kalmytskaya ASSR

PERIODICAL: Geologiya nefi i gaza, 1960,<sup>4</sup> No. 4, pp. 1-8  
1

TEXT: During the last few years a series of oil and gas fields have been discovered in different geological zones in Stavropol'skiy kray and in the Kalmytskaya ASSR. The largest and most productive field is the Severo-Stavropol'sko-Pelagiadinskoye deposit with gas resources amounting to approximately 220-240 billion m<sup>3</sup>. The resources of the other fields amount to 1-30 billion m<sup>3</sup>. Since the detection of the first gusher in Ozek-Suat in 1953, nine multi-layered deposits of high-quality oil have been discovered. Now geological material is available on the Central and East Ciscaucasus, and the structure of five new oil and gas fields is described below. The multi-layered oilfield of Kolodeznoye lies north-west of Velichayevka. A gusher with a yield of 160 tons/24 h. through a 6-mm pipe

Card 1/3

Geological Prospects of Discovery of New Oil  
and Gas Fields in the Stavropol' Region and  
in the Kalmytskaya ASSR

S/009/60/000/004/001/004  
B027/B076

was found in the chalk layer VIII. The Pravoberezhnoye oilfield lies between Velichayevka and Zimnyaya Stavka; a gusher from the chalk layer IX yields 120 tons/24 h. The oilfield of Zhiravskoye is in the deep-seated zone between the Prikumskiy oil area and the Stavropol'skiy gas area. There oil is obtained by drilling from the green Eocene layer at a depth of 2050-2100 m; the oil is of good quality and poor in sulfur. The Radykovskoye oilfield, of local importance, is situated northwest of the Takhta-Kugul'tinskoye deposit. The multi-layered gas deposit of Iki-Burul'skoye was discovered in the Mesozoic and Lower Tertiary zones of the Kalmytskaya ASSR. The gas yield from a gusher amounted to 5-6 million m<sup>3</sup>/24 h, the gas pressure in the bed was 60 atm. The Central Ciscaucasus is the largest gas-bearing area in the North Caucasus. During 1957-1958 the presence of gas was ascertained in the sand deposits north of Maykop, and on the Petrovsko-Blagodarnenskaya and Mirnenskaya plateaux. The East Ciscaucasus is the largest oil-bearing area in the North Caucasus. In the Prikumskaya plain, the deposits of the Middle Jurassic in Ozek-Suat, Zimnyaya Stavka, and Velichayevka are oil-bearing. The Cretaceous deposits of the Upper Cretaceous are also possibly oil-bearing. Large oil and gas deposits

Card 2/3

Geological Prospects of Discovery of New Oil  
and Gas Fields in the Stavropol' Region and  
in the Kalmytskaya ASSR

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B027/B076

are likely to be found in the Stavropol'skiy area and in the Kalmytskaya ASSR, especially in the Mesozoic. As a result of geological research and prospecting in the various zones of the Ciscaucasus and other areas of the USSR, a group of geologists (Professor I. O. Brod, V. G. Vasil'yev, K. A. Belov) were able in November 1959 to re-estimate the gas resources and to increase the estimate from 620 to 1100 billion  $m^3$ . During 1959-1965, test drilling must be extended to at least 56 structures. According to the probability coefficient of discovery equaling 0.5, 28 oil and gas deposits will be found in this number of structures, of these approximately 16 oil-fields and 12 gasfields. The total increase in industrial gas reserves will amount to 180-240 billion  $m^3$  after the Seven-year Plan instead of the planned target of 150 billion  $m^3$ . At the same time, industrial oil reserves are to be increased by 25-30% in comparison to the planned target. In order to achieve these aims, it is necessary for VNIIGeofizika (All-Union Scientific Research Institute of Geophysical Exploration Methods) to intensify seismic and geophysical research work in 1960. There are 4 figures and 1 table.

ASSOCIATION: Stavropol'skiy Sovnarkhoz (Stavropol' Sovnarkhoz)

Card 3/3

BELOV, K.A.

Results of geological prospecting for oil and gas in Stavropol Territory and the outlook for 1959--1965. Trudy VNIGNI no.32: 7-23 '60. (MIRA 14:7)

1. Upravleniye neftyanoy, gazovoy, khimicheskoy i gorno-rudnoy promyshlennosti Stavropol'skogo sovmarkhoza.  
(Stavropol Territory--Petroleum geology)  
(Stavropol Territory--Gas, Natural--Geology)

BROD, I.O.; BELOV, K.A.; BURSHTAR, M.S.; KOROTKOV, S.T.; NISMEYANOV,  
D.F.; TSATUROV, A.I.

Oil and gas potentials of Ciscaucasia in view of the distribution  
characteristics of accumulations in the piedmont basins. Trudy  
VNIGNI no.32:76-99 '60. (MIRA 14:7)

(Caucasus, Northern--Petroleum geology)  
(Caucasus, Northern--Gas, Natural--Geology)

BELOV, K.A.

Basic results of geological prospecting for oil and gas in 1960  
in Stavropol Territory. Geol.nefti i gaza 5 no.9:6-9 S '61.  
(MIRA 14:10)

1. Stavropol'skiy sovnarkhoz.  
(Stavropol Territory--Petroleum geology)  
(Stavropol Territory--Gas, Natural--Geology)

BELOV, K.A.

~~Belov, K.A.~~, akademik

"Gas fields in the U.S.S.R." by K.A.Belov and others. Reviewed by  
A.A.Trofimuk. Geol.nefti gaza 6 no.4:61-63 Ap '62.

(MIRA 15:4)

(Gas, Natural—Geology) (Belov, K.A.) (Vasil'ev, V.G.)

(Elin, N.D.) (Erofeev, N.S.) (Korotkov, S.T.)

(L'vov, M.S.) (Mironchev, I.U.P.) (Muratova, A.T.)  
(Rozhkov, E.L.)



VASIL'YEV, V.G.; MERZLENKO, Yu.F.; MATSKEVICH, M.M.; ZHIVAGO, N.V.;  
 LI CHZHAO-ZHEN' [LI Chao-Jên]; GOLYAKOV, V.A.; SHABATIN, I.V.;  
 BORISENKO, Ye.M.; MIROSHNIKOV, M.V.; USPENSKAYA, N.Yu.;  
 KHEL'KVIST, V.G.; GRATSIANOVA, O.P.; BUDNIKOV, N.B.; BELOV, K.A.;  
 MAKSIMOV, S.P.

Discussion. Trudy VNIGNI no.32:282-336 '60. (MIRA 14:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnogo gaza (for Vasil'yev, Zhivago, Khel'kvist). 2. Neftepromyslovoye upravleniye Stavropol'neft' (for Merzlenko). 3. Groznenskiy nauchnoissledovatel'skiy neftyanoy institut (for Matskevich).
  4. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im. I.M. Gubkina (for Li Chzhao-zhen', Uspenskaya). 5. Stavropol'skiy filial Groznenskogo nauchnoissledovatel'skogo neftyanogo instituta (for Golyakov, Shabatin, Borisenko, Miroshnikov).
  6. Ministerstvo geologii i okhrany neдр SSSR (for Gratsianova, Budnikov). 7. Glavnyy geolog neftyanogo i gazovogo upravleniya Stavropol'skogo sovnarkhoza (for Belov).
- (Caucasus, Northern--Petroleum geology)  
 (Caucasus, Northern--Gas, Natural--Geology)

BROD, I.O.; ALEKSIN, A.G.; BELOV, K.A.; KUPRIN, P.N.; NESMEYANOV, D.V.;  
POL'STER, L.A.; TSATUROV, A.I.

Middle Caspian oil- and gas-bearing basin; appearance of regularities  
in the spread of oil and gas accumulations in central and eastern  
Ciscaucasia and in the Kara-Bogaz region. Zakonom. razm. polezn.  
iskop. 5:483-535 '62. (MIRA 15:12)

1. Kompleksnaya neftegazovaya geologicheskaya ekspeditsiya AN SSSR,  
Moskovskiy gosudarstvennyy universitet, Komitet po koordinatsii nauchno-  
issledovatel'skikh rabot pri Sovete Ministrov SSR i Stavropol'skiy i  
Checheno-Ingushskiy sovery nardonogo khozyystva.  
(Caspian Sea region—Petroleum geology)  
(Caspian Sea region—Gas, Natural—Geology)

BELOV, K.A.

Prospecting for commercial oil fields in the Kuma Valley.  
Trudy VNI no.33:106-115 '61. (MIRA 16:7)

1. Stavropol'skiy sovet narodnogo khozyaystva.  
(Kuma Valley--Petroleum geology)